

Notice of Allowability	Application No.	Applicant(s)	
	10/068,940	SHINBATA, HIROYUKI	
	Examiner	Art Unit	
	Sath V. Perungavoor	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 02/28/2006.
2. ☒ The allowed claim(s) is/are 1,3,4,9,11,12 and 22-26.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>05082006</u> . 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
|--|---|

EXAMINER'S AMENDMENT

[1] An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

[2] Authorization for this examiner's amendment was given in a telephone interview with Mark A. Williamson (Reg. No. 33, 628) on April 8, 2006.

[3] The application has been amended as follows:

In claim 1

Please replace all subject matter in claim 1 with the following:

1. (Currently Amended) An image processing apparatus for processing a photographed image of a body including a neck region, said apparatus comprising:

an object extracting portion configured to extract a body region from the photographed image;

a region extracting portion configured to extract a region ~~including~~of a cervical spine as ~~a predetermined region~~ by determining a minimum value on a line segment connecting a pixel showing a maximum value on a contour on one side of the body region and a pixel showing a maximum value on a contour on the other side of the body region;

an analyzing portion configured to calculate a statistics value from the ~~predetermined~~ extracted region; and

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a gradation conversion portion configured to execute a gradation conversion processing on the photographed image based on the statistics value[[,]].

~~wherein the region extracting portion extracts a region including a point showing a minimum value on the line segment as the predetermined region.~~

In claim 12

Please replace all subject matter in claim 12 with the following:

12. (Currently Amended) An image processing method for processing a photographed image of a body including a neck region, said method comprising the steps of:

extracting a body region from the photographed image;

extracting a region including of a cervical spine as a ~~predetermined region~~ by determining a minimum value on a line segment connecting a pixel showing a maximum value on a contour on one side of the body region and a pixel showing a maximum value on a contour on the other side of the body region;

calculating a statistics value from the ~~predetermined~~ extracted region; and

executing a gradation conversion processing on the photographed image based on the statistics value[[,]].

~~wherein the step of extracting the region including the cervical spine region as the predetermined region extracts a region including a point showing a minimum value on the line segment as the predetermined region.~~

REASONS FOR ALLOWANCE

[4] The following is an examiner's statement of reasons for allowance: The instant invention is a cervical spine extraction method.

Prior art was found and applied in the non-final and final office actions. Applicant uniquely claimed a distinct feature in the instant invention, which are not found in the prior art, either singularly or in combination. The feature is (emphasis added) "determining a **minimum value on a line segment connecting a pixel showing a maximum value on a contour on one side** of the body region and a **pixel showing a maximum value on a contour on the other side** of the body region".

This feature is not found or suggested in the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

[5] Claims 1, 3, 4, 9, 11, 12, 22-26 are allowed.

Contact Information


[6] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Sath V. Perungavoor whose telephone number is (571) 272-7455. The examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Bhavesh M. Mehta whose telephone number is (571) 272-7453, can be reached on Monday to Friday from 9:00am to 5:00pm. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dated: May 8, 2006

By: 

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BHAVESH M. MEHTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600